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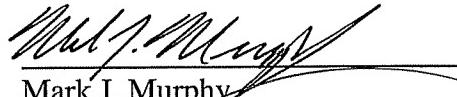
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in the following listed application(s) or patent(s) for which the issue fee has been paid.

<u>Patent No.</u>	<u>Serial No.</u>	<u>Patent Date</u>	<u>US Filing Date</u>	<u>Confirmation No.</u>	<u>Attorney Docket No.</u>
7,517,470 B2	10/809,130	04/14/2009	03/25/2004	7717	0553-0402

Respectfully Submitted,



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(12) **United States Patent**
Seo et al.

(10) **Patent No.:** US 7,517,470 B2
(45) **Date of Patent:** Apr. 14, 2009

(54) **ORGANIC-INORGANIC HYBRID MATERIAL, COMPOSITION FOR SYNTHESIZING THE SAME, AND MANUFACTURING METHOD OF THE SAME**

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(73) Assignee: Semiconductor Energy Laboratory Co., Ltd. (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 426 days.

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C09D 1/00 (2006.01)
C09D 7/12 (2006.01)

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(58) **Field of Classification Search** 428/917; 257/40; 252/62.3 Q, 62.3 R, 519.1, 519.21, 252/519.34, 521.5, 521.3

See application file for complete search history.

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(57) **ABSTRACT**

An organic-inorganic hybrid material comprising a metal oxide and a chelating ligand is synthesized. The function of a coloring property, a light-emitting property, or semiconductivity of the organic-inorganic hybrid material can be controlled by chelating ligand. The organic-inorganic hybrid material is prepared by sol-gel method using sol which includes a metal alkoxide and/or a metal salt and a functional chelating agent.

22 Claims, 13 Drawing Sheets

